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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,357	10/08/2002	Hatem Belfadhel	121123-1	5645
43248	7590	06/13/2005		
CANTOR COLBURN LLP 55 GRIFFIN RD SOUTH BLOOMFIELD, CT 06002			EXAMINER BOYKIN, TERRESSA M	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 06/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/065,357

Applicant(s)

BELFADHEL ET AL.

Examiner

Terressa M. Boykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-28 is/are allowed.
- 6) ☒ Claim(s) 29-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### ***Response to Arguments***

Applicant's arguments with respect to claims 13,17,21 and 25 have been considered but are moot in view of the new ground(s) of rejection.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 29-35 are rejected under 35 U.S.C. 102(b ) as being anticipated by USP 6013845 see cols. 1-3 and figure 1 and claim 1.

USP 6013845 discloses a reactor system for conducting chemical reactions is presented in which a reactor is operated in an upflow mode with a fixed bed catalyst and randomly distributed reactor packing therein. The reactor system and the process in which it is used exhibit plug flow behavior and are amenable to employing lightly crosslinked ion exchange resin catalysts.

The reference further discloses that it is sometimes desirable or necessary to conduct reactions in the upflow mode. For example, in downflow processes the potential for catalyst bed collapse at high flow rates because of the low degree of crosslinking and the effects that this has on the physical properties of the catalyst must be considered. Increased byproduct production attributable to longer residence times must be also be considered. Thus, it would be desirable to operate the reactor in the upflow mode to allow the resin bed to fluidize instead of collapsing and to take advantage of possible selectivity improvements.

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FIG. 2 further describes the process of this invention as it may be applied to the production of bisphenols from ketones and phenols. Upstream process 1 produces ketones and phenols (such as DMK and phenol). One such upstream process is the cleavage of cumene hydroperoxide. It is also possible to employ as reactant "on purpose" DMK produced by the oxidation of isopropyl alcohol. Upstream process 1 is also understood to be the bisphenol reactant source.

Thus, in view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

### **35 USC 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

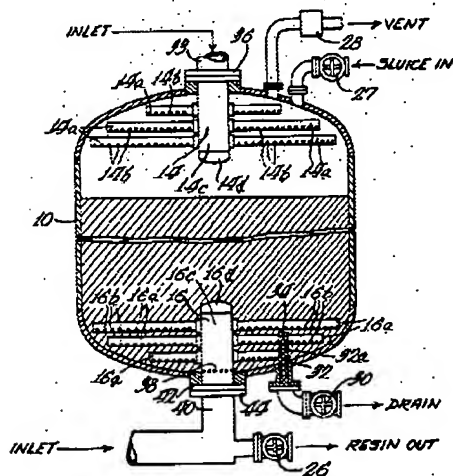
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 29 – 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 3847805 see abstract, figure 1, cols. 4 –6 and claims 1, 2 and 3.**

USP 3847805 discloses an ion exchange vessel containing ion exchange resin comprising a distribution means, liquid supply means connected to said distribution means for providing upward service flow, a collection means positioned above said

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distribution means, liquid supply means connected to said collection means for selectively providing downward liquid flow, said distribution means comprising unscreened apertured distribution means for both supplying said upward service flow and for removing resin from said vessel when said downward liquid flow is being selectively provided through said vessel and draining means comprising a screened lower drain for selectively draining liquid from said vessel without the removal of any substantial amount of resin from said vessel, said distribution means comprises a hollow hub which protrudes upwardly through the center of the bottom of said vessel and a plurality of hollow radially extending unscreened apertured laterals which are in fluid communication with said hub, said hub having a plurality of unscreened holes therein which extend circumferentially around said hub adjacent the area where said hub protrudes through the bottom of said vessel.



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FIG. 1 is a schematic cross-sectional illustration that shows a condensate polishing ion exchange vessel utilizing the present invention.

Note that applicants new claims 29 through 35 do not contain the limitations of the reactor as set forth applicants previous claims nor do applicants' new claims contain the subject matter to which applicants arguments are directed. The claims simply state an "upflow reactor" with no specific limitations therein. Thus, it would have been obvious for one of ordinary skill in the art to manufacture a dihydroxy compound using the above reactor since it is disclosed therein that such a reactor may be used in condensation reactions and the like. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

### **Correspondence**

**Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov)), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is ( 571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

  
Examiner Terressa Boykin  
Primary Examiner  
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